

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 January 2001 (11.01.2001)

PCT

(10) International Publication Number
WO 01/02399 A1

(51) International Patent Classification⁷: C07D 473/34,
A61K 31/52

rue de la Biberonne, F-77410 Claye Souilly (FR). RUXER,
Jean-Marie [FR/FR]; 12, Esplanade de la Manufacture,
F-92130 Issy les Moulineaux (FR).

(21) International Application Number: PCT/EP00/05921

(22) International Filing Date: 26 June 2000 (26.06.2000)

(74) Agent: VIEILLEFOSSE, Jean-Claude; Hoechst Marion
Roussel, 102, route de Noisy, F-93235 Romainville Cedex
(FR).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
99112637.6 2 July 1999 (02.07.1999) EP

(81) Designated States (*national*): AE, AG, AL, AU, BA, BB,
BG, BR, BZ, CA, CN, CR, CU, CZ, DM, DZ, EE, GD, GE,
HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV,
MA, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK,
TR, TT, UA, US, UZ, VN, YU, ZA.

(71) Applicants (*for all designated States except US*): AVEN-
TIS PHARMA DEUTSCHLAND GMBH [DE/DE];
Brüningstrasse 50, D-65929 Frankfurt am Main (DE).
GENENTECH INC. [US/US]; 1 DNA Way, South San
Francisco, CA 94080-4990 (US).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

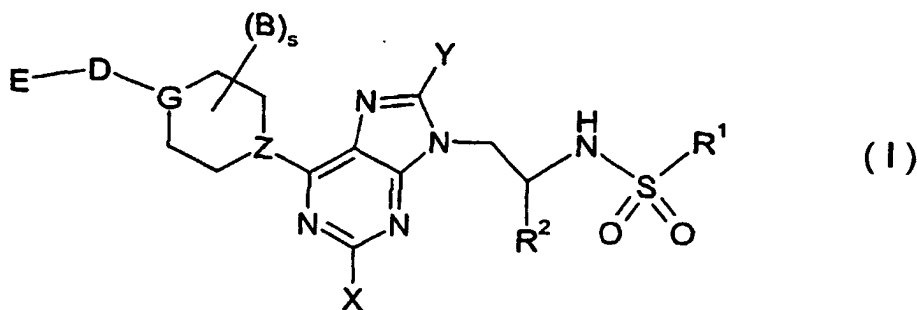
(75) Inventors/Applicants (*for US only*): PEYMAN,
Anuschirwan [DE/DE]; Zeilsheimer Strasse 46, D-65779
Kelkheim (DE). KNOLLE, Jochen [DE/US]; 178 Grand
Vien #3, San Francisco, CA 94114 (US). GADEK,
Thomas, R. [US/US]; 2838 Chelsea Drive, Oakland, CA
94611 (US). GOURVEST, Jean-François [FR/FR]; 12,

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: SUBSTITUTED PURINE DERIVATIVES AS INHIBITORS OF CELL ADHESION



(57) Abstract: The present invention relates to compounds of formula (I), in which B, D, E, G, X, Y, Z, R¹, R² and s have the meanings indicated in the claims, their physiologically tolerable salts and their prodrugs. The compounds of formula (I) are valuable for the therapy and prophylaxis of illnesses which are based on the interaction between vitronectin receptors and their ligands in cell-cell or cell-matrix interaction processes or which can be prevented, alleviated or cured by influencing such interactions. For example, they can be applied for inhibiting bone resorption by osteoclasts and thus for treating and preventing osteoporosis, or for inhibiting undesired angiogenesis or proliferation of cells of the vascular smooth musculature. The invention furthermore relates to processes for the preparation of compounds of formula (I), their use, in particular as active ingredients in pharmaceuticals, and pharmaceutical compositions comprising them.

WO 01/02399 A1